AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/816,381

AMENDMENTS TO THE SPECIFICATION

Please replace the first paragraph of page 1 with the following paragraph:

This invention relates to~~is based on~~ a process for recovering disturbed, digital, optical signals and a feedback decision circuit used in such a process

~~— converting the disturbed signals are opto-electrically,~~

~~— passing the electrical, disturbed signals through a feedback decision circuit comprising at least two parallel-connected threshold decision elements,~~

~~— using the decided signals and an estimated dispersion as the basis for the synthesisation of synthetic, dispersive signals,~~

~~— generating an error signal with the disturbed signals and the synthetic, dispersive signals are used~~

~~— and using the error signal to derive the setting parameters for setting the threshold decision elements~~.

Please add the following heading before the first full paragraph of page 3:

SUMMARY OF THE INVENTION

Please replace the heading before the last full paragraph of page 3 with the following heading:

BRIEF DESCRIPTION OF THE DRAWINGS

Please add the following heading between lines 17 and 19 of page 4, before the paragraph beginning "Figure 3 shows":

DETAILED DESCRIPTION OF EMBODIMENTS

Please replace the paragraph bridging pages 4 and 5 with the following paragraph:

Figure 3 shows the main components of the equalizer according to the invention. A disturbed optical signal 1 is applied to a DFE 7. In this exemplary embodiment a DFE with two threshold decision elements, requiring two setting parameters, is used. The output of the DFE 7 supplies a signal 11 in respect of which a decision has been made. An analogue control stage 15 is shown in a broken-line frame. This analogue control stage 15 supplies setting parameters B1 and 1-B1 at its input end to the DFE. To perform the analogue control - as described in the prior art and with reference to Figure 1 - an adder A2, a multiplier M3, an adder A3 and a multiplier M4 and an adder A4 are used in the circuit according to the invention. A synthetic dispersive signal 9 and the disturbed optical signal 1 serve as input signal for the adder A2. The synthetic dispersive signal 9 is generated by tapping the decided signal 11, at nodes 8, and the fed-back setting parameters B1 and 1-B1. The first parameter B1 is multiplied in the multiplier M1 by the decided signal 11, and the second parameter 1-B1 is also multiplied by the decided signal 11 in a second multiplier M2. The multiplied signal of the multiplier M2 is delayed by 1 bit via a delay element V1. The results of the multiplier M1 and of the time-delayed signal of the multiplier M2 are added in an adder A1. This procedure yields a synthetic dispersive signal 9 which is based upon the decided signal and upon an estimation of the dispersion effects on the basis of the

signal and echo amplitudes of the input signal. In the adder A2 the disturbed signal 1 is subtracted from the synthetic dispersive signal 9. The result is an error signal 10. The output of the adder A2 is connected both to a multiplier M3 and to a multiplier M4. In the multiplier M3 the error signal is multiplied by the decided signal. The result of this multiplication is applied to an adder A3. The adder A3 determines the setting parameter B1 for the feedback into the DFE 7. The second setting parameter 1-B1 is generated by multiplying the error signal 10 by a decided signal 11 time-delayed by 1 bit. Here again the result of the multiplier M4 is fed through an adder A4 which determines the parameter 1-B1. An optimum is achieved with this circuit when the outputs of the adders A3 and A4 are each 0.